



Budget Inkjet Printers

You may not have a lot of money to spend on a printer, but just because you're on a budget doesn't mean you have to accept low quality, efficiency or speed. We test nine inkjets in search of a bargain

Laser printers may be getting more affordable, but if you want a cheap and simple colour printer for your home, an inkjet still takes some beating. Entry-level inkjets cost a fifth of the price of the cheapest colour lasers. They also take up less room, make less noise, use less electricity and are much easier to maintain. Cheap inkjets have traditionally suffered from high running costs and slow printing, but fortunately these are no longer always a problem.

This month we've tested nine new printers from the four major inkjet manufacturers. They range from true entry-level models that cost just

£43 including VAT to more highly specified printers that cost over £100 including VAT. Two of them can print pages of black text faster than a budget laser printer, and three have lower colour running costs than we'd expect from an entry-level colour laser.

BUT IS IT WORTH IT?

A printer's price and specification can only tell you so much about whether it's a true bargain; hands-on testing is the true indicator of whether it's worth the paper it prints on. In this review, we'll help you decide whether you should settle for a cheap printer, or whether it pays to spend a little more.

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CHOOSING A... BUDGET INKJET PRINTER

If the price is right you might not be too concerned about missing out on flashy features, but don't neglect the fundamentals. Follow our buying guide to make sure you know what's important to you

Spending less than £60 on an inkjet printer might force you to compromise on certain features, but choose well and you'll be surprised by the performance you can afford. The cheapest printer in our test costs only £43 including VAT, yet it can rattle off more than eight pages of text a minute. It even produces decent photo prints.

Pay a little more and you would probably expect faster speeds and higher-quality prints, but our tests show that this isn't necessarily the case. Each printer has its strengths, but even some expensive models have weaknesses.

COUNTING THE COST

It's tempting to compare inkjets on price alone, but this doesn't tell you how much printing will cost once the supplied ink has run out. Cartridge prices vary widely, and some cheap printers are not the bargains they seem. Manufacturers tend to supply less ink with entry-level models, so for anything other than light use you may end up buying replacement cartridges that cost almost as much as the printer itself.

Our table on page 198 shows how many pages you can expect to get from the cartridges that come with each inkjet. The *Shopper* tests involve printing at least 100 pages of black text, more than 20 pages of colour graphics and several photos. Many of the cheapest models were warning us about ink levels by the time we had finished.

Our table also lists how much each page will cost to print if you buy cartridges made by the printer's manufacturer. Many of the printers use brand new cartridges that weren't widely available online as we went to press; it's possible these prices will fall once more suppliers have more stock.

It may seem like a good idea to buy the cheapest cartridges available, but using third-party inks in a new printer may invalidate its warranty. Always buy high-yield supplies where these are



▲ Canon's PIXMA iP4200 has two input trays, so you can keep plain paper in one and headed or photo paper in the other. It also prints on coated CDs or DVDs

available; they cost more, but they're always better value in the long run.

PACE MAKERS

Inkjet printers are generally considered slow, but this isn't strictly the case. Inkjets need time to print at their highest quality, but if you only need draft output you can have it very quickly. Two of the HP printers on test almost reached 20 pages per minute (ppm) in one of our text tests, which is faster than many laser printers we've tested.

It's important to take each manufacturer's quoted speed figures with a pinch of salt. The DeskJet 5940 and 6620 are fast, but they barely reached two-thirds of the 30ppm claimed by HP. Photo prints in particular normally take longer than manufacturers claim. Inkjets print photos best at their highest possible quality settings, but manufacturers usually list times for a lower-quality print. We perform all our tests at realistic settings to show how fast printers are in everyday use.

TRICK OR TREAT

Budget inkjets are simple devices, and we had no problems setting up any of the printers in this group test. Lexmark's Z735 uses only one ink cartridge and has an excellent installation program, so it's particularly easy. Canon's PIXMA iP4200 is a little more tricky, as you must install its print head before slotting in five separate ink cartridges. This is not as complicated as it sounds, however.

To get the best quality from an inkjet, you should align its print heads. Four of the printers on test do this automatically; the other five have reasonably easy manual routines. Epson's involves printing four sheets of paper, though, and it takes a long time.

Most manufacturers provide drivers that are simple to understand, with sensible default settings that should help you get the right balance between speed and quality. All the printers allow you to save paper by printing multiple pages on each sheet of paper, and give you guidance on how to print on both sides manually. Canon's PIXMA iP4200 even does duplex prints automatically.

BORDER PATROL

None of the inkjets we tested is designed specifically for photo use, but we found that even the cheapest produced decent photo prints. All nine devices can print with no borders on 6x4" or A4 photo paper. The three HP printers and Canon's PIXMA iP4200 have a PictBridge USB port, so they can produce images directly from a compatible camera.

The HP printers can also use an optional photo cartridge, enabling them to print with six inks. This helps them produce better photos, but it's an extra cost and only an enthusiast would be likely to spot the difference.

ROOM FOR GROWTH

Finally, it's worth considering whether your printer can keep pace if your needs change. Most of these models are cheap and basic, so they aren't built with upgrades in mind. However, you could add a second paper tray or automatic duplex (double-sided) printing to HP's DeskJet 6620. This may be useful, but Canon's PIXMA iP4200 has the same features as standard.



All three HP printers have PictBridge USB ports, which could be handy if you have a digital camera



Lexmark's Z735 takes just one ink cartridge, which is very unusual. It makes it a little easier to service, but its text printing suffers without a black ink



CANON PIXMA iP1600

RATING ★★★★★

PRICE £43 inc VAT

SUPPLIER www.savastore.com

DETAILS www.canon.co.uk

The Canon PIXMA iP1600 replaces the iP1500, which we reviewed in our budget inkjet test in Shopper, April 2005. That printer has been on our Hotlist ever since, so we were keen to see if Canon had been able to improve on it.

Like its predecessor, the iP1600 is a basic device. It has a 100-sheet paper input and no output tray. Printed pages follow a J-path through the printer before dropping directly on the desk. Paper could end up on the floor if you can't place the PIXMA at the back of a desk, but sheets remained in tidy piles during all our tests.

Previous Canon inkjets we've reviewed have used print heads and ink tanks that can be replaced separately. However, the iP1600 uses ink cartridges with a built-in print head. This is similar to the system used by HP, but Canon doesn't make a photo cartridge that enables six-ink printing. Unlike the iP2200, this inkjet won't accept the higher capacity PG-50 and CL-51 cartridges, so its running costs are high.

The iP1600 is fast for such an affordable printer. It delivered draft text at almost nine pages per minute, and was the fastest device here to complete 50 copies of our letter test. Its performance when printing in colour was good.

This inkjet produces prints of a quality close to those from more expensive printers, particularly on plain paper, where it produced crisp character outlines and solid-looking colour without banding. Its photo output had remarkably little grain for a four-ink printer, but it wasn't the best on test.

VERDICT

The iP1600 is a worthy budget inkjet that's capable of delivering sound results quickly. It's significantly more expensive to run than its predecessor, however. It's a shame that Canon has prevented use of the higher-capacity cartridges, as with lower running costs the iP1600 would have won a Best Budget Buy award.

✓ Very affordable; fast for the price; decent print quality

✗ Expensive to run; no output tray

SPECIFICATIONS Four-colour inkjet, 4,800x1,200dpi maximum resolution, USB interface. **Part code** 9989A011AA



EPSON Stylus D68 Photo Edition

RATING ★★

PRICE £43 inc VAT

SUPPLIER www.savastore.com

DETAILS www.epson.co.uk

Epson's Stylus D68 replaces the Stylus C66, which was not one of our favourite inkjets. Our major criticisms of the C66 were that it was slow and its DURABrite pigment inks produced photos with a dull matt finish. Pigment inks resist fading for a long time, but there's not much point if the photo looks poor in the first place.

Epson has stuck with pigment inks for the Stylus D68, but the company says that its new DURABrite Ultra system delivers good results across all media, including standard glossy photo paper. Photo prints from the D68 don't quite match the high-gloss finish that's possible with dye inks, but they are much better than prints from the C66.

Both Epson printers in this test use separate ink tanks that contain black, cyan, magenta and yellow inks. The print heads remain in the printer and are not replaced with new cartridges, but they need occasional alignment. This is more time-consuming than with the other printers, as it involves printing four sheets and choosing the best-aligned patterns on each.

Like its predecessor, this inkjet was very slow across all our tests. We weren't happy with the blocky, striped text it produced in Draft mode, so we ran our 50-page test at the printer's Text setting. This produced satisfactory print quality, but also the slowest performance in this group.

It was a similar story with all our timed tests. The D68 was substantially the slowest here, but at moderate or high-quality settings its print quality was very good. This was particularly true on plain paper, where colour prints seemed especially bold and text was solid black.

VERDICT

The Stylus D68 has lower running costs than any of the other inkjets that cost under £50. It's definitely a big improvement over the C66, as it produces acceptable photo prints. However, it's still incredibly slow.

✓ Very affordable; comparatively cheap to run

✗ Slow; tedious head alignment process

SPECIFICATIONS Four-colour inkjet, 5,760x1,440dpi maximum resolution, USB interface. **Part code** C11C616021CA



LEXMARK Z735

RATING ★★

PRICE £47 inc VAT

SUPPLIER www.savastore.com

DETAILS www.lexmark.co.uk

Like many Lexmark products that we've reviewed recently, the Z735 is designed to be easy to set up and use. Its quick install program was one of only three here to spot that we hadn't yet inserted ink cartridges and prompted us to do so before continuing. This is the most affordable inkjet with automatic head alignment, so you don't need to squint at alignment pages each time you change a cartridge.

The Z735 requires a single ink cartridge, which contains just cyan, magenta and yellow inks. We've seen this approach before on compact photo printers, but the absence of a black ink is unusual for a general-purpose A4 inkjet; the Z735 has to create black by mixing all three colours.

Lexmark says that the three-ink setup makes the Z735 simple to use and inexpensive to run. The single cartridge costs less than £13 and does reduce the chance of buying the wrong consumable, but managing two cartridges is hardly rocket science. At around 6.2 pence per page, the Z735's colour costs compare well to those of other budget inkjets, but at 7.6 pence per page it is expensive when printing in black.

The Z735's text output on plain paper was below par. None of the driver's settings produced dark characters with crisp outlines, and text was off-black at even the highest-quality setting. Colour prints were better, though dark colours lacked saturation, reducing contrast levels.

We were more impressed with the Z735's photo output on glossy paper. Images had good levels of detail and no banding, with only a little grain. They were quick to print, too.

VERDICT

The Z735 is affordable and easy to handle, but its plain paper print quality isn't good enough. We don't think that its poor black text is an acceptable price to pay for the simplicity of a single ink cartridge.

✓ Inexpensive; onsite warranty; decent photo printing; good partner for a mono laser

✗ Poor plain paper print quality; expensive mono prints

SPECIFICATIONS Three-colour inkjet, 4,800x1,200dpi maximum resolution, USB interface. **Part code** 20M0002



CANON PIXMA iP2200

RATING ★★

PRICE £58 inc VAT

SUPPLIER www.savastore.com

DETAILS www.canon.co.uk

Canon's PIXMA iP2200 is a direct replacement for the iP2000, which won a Best Budget Buy award in our December 2004 photo printing labs test. Cosmetically, only some different-coloured plastic distinguishes this printer from the cheaper iP1600, and it also lacks an output tray. We were disappointed to find that the iP2200 doesn't have two paper inputs like its predecessor.

The iP2200 is shipped with the same standard capacity cartridges as the iP1600, but unlike the cheaper printer it can also be fitted with high-capacity cartridges. This makes the iP2200 cheaper to run, but the difference is surprisingly small.

Both printers have higher running costs than the models they replace, which weren't especially keen. As we went to press, Canon's new cartridges weren't widely available. Prices do tend to drop in the first few months after introduction, so we would hope to see more competitive costs in time. That said, Epson's D68 is equally new but has lower mono costs.

In mono, Canon's figures give the iP2200 a 3ppm speed advantage over its cheaper sibling, but there was nothing between them in our text tests. That said, both performed competently. The iP2200 was quicker than the iP1600 when printing in colour, but the margin only became significant in our photo tests, where the iP2200 was one of the fastest printers. Its print quality was as high as the iP1600 in all our tests.

VERDICT

The iP2200 is a decent budget inkjet printer, but it costs more than an entry-level printer. At this price, we'd expect to find a proper output tray and lower running costs. We're particularly disappointed that Canon hasn't fitted this printer with a second paper tray. It seems a little ordinary without it, and doesn't offer enough to distance itself from the iP1600.

✓ Decent print quality

✗ Not significantly better than the cheaper PIXMA iP1600

SPECIFICATIONS Four-colour inkjet, 4,800x1,200dpi maximum resolution, USB interface. **Part code** 9990A011AA



HP DeskJet 5440

RATING ★★★

PRICE £58 inc VAT

SUPPLIER <http://uk.insight.com>

DETAILS www.hp.co.uk

The DeskJet 5440 costs £15 more than the cheapest printer in this group, but it's the most affordable of the three HP models. It has the same shape and dimensions as the more expensive DeskJet 5940, but is finished in smart white plastic rather than metal.

There's a more important difference, however. Where the other HP printers in this test use standard or high-yield black and colour cartridges, the DeskJet 5440 takes only new lower-capacity supplies. These are the same physical size as the standard cartridges, yet they contain less ink.

We asked HP why the printer wouldn't accept the standard cartridges and were told that it was designed for low volume users, who are more cost-sensitive than high-volume users. HP spokesperson Kerry Hogarth told us: "HP wanted to offer a low-cost, low-volume cartridge set to suit low volume users' demands." We accept that some users might value a low purchase price over a low cost per page, but users of the 5440 won't have a choice.

This is unfortunate, as the 5440 is otherwise a very capable printer. It performed strongly on plain paper, producing draft text at 14ppm in our tests. Higher-quality settings slowed it down, but it still completed our mixed colour test at a competitive 1.6ppm.

Although the 5440 does accept HP's #348 photo cartridge, which gives it optional six-ink printing, we couldn't see any difference between the prints this produced and those from a standard four-ink setup. The cartridge makes a noticeable difference in both the other HP printers in this group.

VERDICT

The DeskJet 5440 is a competent printer, but it doesn't stand out. Its low-capacity supplies give it higher running costs than the other HP printers here, but it isn't cheap enough make up for it.

✓ Fast and quiet; six-ink capability

✗ Quite expensive to run; six-ink results are disappointing

SPECIFICATIONS Four-colour inkjet, 4,800x1,200dpi maximum resolution, USB interface. **Part code** 9990A011AA



EPSON Stylus D88 Photo Edition

RATING ★★★

PRICE £62 inc VAT

SUPPLIER www.misco.co.uk

DETAILS www.epson.co.uk

Like the Stylus D68 reviewed on the previous page, Epson's Stylus D88 is a direct replacement for an existing model. There's little difference between the specification of this printer and the Stylus C86 that it succeeds, however. Like the D68, the Stylus D88 uses the new DURABrite Ultra pigment inks. It uses the same manual head alignment routine as the D68, but is otherwise simple to set up.

Both the new Epson printers reviewed in this test use a separate ink cartridge for each colour, rather than the two-cartridge system used by HP and two of the Canon inkjets. Epson's approach can help reduce print costs, as you never need throw away unused ink. However, although both Epson inkjets have low mono running costs, neither is especially affordable in colour.

Like many of the printers on test, Epson's cartridges were so new that they weren't widely available at the time we went to press. We'd expect to see a small decrease in prices over the next few months.

We expect any printer to produce legible text at any quality setting. Draft text from the D88 is a big improvement over that from the D68, so we were able to run our 50-page document test at its fastest setting. This produced a rapid result, but as the D88's sturdy output tray has no lip to retain printed paper, pages spilled on to the desk and lost their order.

At higher-quality settings the D88 is too slow for this to be a problem, and its plain paper print quality is among the best here. Colour graphics benefit from solid-looking colours and text is dark black.

VERDICT

The D88 produces decent print quality and is reasonably priced. It's a competent printer, but it isn't as fast or as cheap to run as HP's DeskJet 5940.

✓ Good print quality; reasonable mono running costs

✗ Slow at high-quality settings; moderately expensive in colour

SPECIFICATIONS Four-colour inkjet, 5,760x1,440dpi maximum resolution, USB and parallel interfaces. **Part code** C11C617021CA



HP DeskJet 5940



RATING ★★★★★

PRICE £74 inc VAT

SUPPLIER <http://uk.insight.com>DETAILS www.hp.co.uk

HP's DeskJet 5940 isn't particularly expensive, but it looks very classy and feels well-made. The printer's lid is finished in brushed aluminium and its hinges are damped to stop it slamming closed. Its paper trays feel rock-solid, and like all the HP printers in this test it has a PictBridge USB port. This allows you to connect a digital camera easily and print photos without the need for a PC.

Unlike the cheaper 5440, this printer will take almost the full range of HP's Vivera ink cartridges, with the exception of the #100 photo grey tank. Although it is sold with a 7ml colour cartridge, this can be replaced by the high-yield 14ml cartridge, which lasts for 450 pages.

Crucially, the printer comes with HP's 800-page #339 black cartridge, which has a huge print head designed for very fast printing. With it, HP says the 5940 can reach mono speeds of 30ppm. Using high-yield supplies, this inkjet has some of the lowest running costs we've seen. It even gives certain colour lasers a run for their money.

The 5940 didn't come close to HP's claimed speeds in our tests, but it was still astonishingly fast, particularly when printing draft mono text. Its speed of nearly 20ppm is faster than we've seen from many budget mono lasers. Though its print quality at this speed isn't laser-class, it's certainly good enough for drafts.

Higher-quality settings did slow the 5940 down, but it was still rapid in all our tests. Its print quality was consistently high, though photos printed without the optional photo cartridge did have a little grain.

VERDICT

The 5940 doesn't have the useful paper-handling features of Canon's PIXMA iP4200, but it costs less to buy and run, and is comprehensively faster. It's not the most affordable printer here, but it's clearly the best value.

✓ Very fast; quiet; good value and cheap to run

✗ No upgrades available

SPECIFICATIONS Four-colour inkjet, 4,800x1,200dpi maximum resolution, USB interface. **Part code** Q9017B



CANON PIXMA iP4200

RATING ★★★★★

PRICE £104 inc VAT

SUPPLIER www.savastore.comDETAILS www.canon.co.uk

The PIXMA iP4200 is the most expensive of the three Canon printers in this group, but a quick glance at its specifications shows that it's the most sophisticated by far. It prints with a minimum ink droplet size of just one picolitre, which should help to reduce the appearance of grain, and has an extremely high 9,600x2,400 dots per inch (dpi) print resolution.

Like the iP4000, which it replaces, this inkjet has two paper inputs. Each takes up to 150 sheets of paper, but one can be left loaded with envelopes, headed paper or glossy photo paper. Uniquely in this group, the iP4200 can automatically print both sides of a piece of paper, which cuts down on waste and makes it easier to produce professional-looking booklets.

This printer's extremely small droplet size helped it produce particularly sharp and detailed photos in our test. Grain was invisible to the naked eye, though the colours in some of our images appeared a little too saturated by default.

Unfortunately, the iP4200's plain paper performance was less convincing. Text printed at the Standard setting suffered from a slight glitch, so we had to use the high-quality setting for our letter test. The printer was a little slow in both our mono text tests, but it produced the fastest result of the group in our mixed-colour test.

We noticed that prints made using the duplex feature appeared more faint than single-sided prints made at the same quality setting. The Fast output quality was still acceptable, but repeating our document test in duplex mode more than doubled the time taken.

VERDICT

The iP4200's high specification helps it to produce sharp and grain-free photos, but few users are likely to notice the improvement over HP's six-ink results. The PIXMA's clever paper-handling could come in handy, but we don't think it's worth £30 more than the DeskJet 5940.

✓ Great paper handling features

✗ Expensive to buy; colour prints could be cheaper

SPECIFICATIONS Five-colour inkjet, 9,600x2,400dpi maximum resolution, USB Hi-speed interface. **Part code** 9992A011AA



HP DeskJet 6620

RATING ★★★★★

PRICE £110 inc VAT

SUPPLIER www.misco.co.ukDETAILS www.hp.co.uk

The 6620 is the most expensive inkjet here, but it's the only one that comes with an Ethernet connection. Using any of the other inkjets with multiple networked computers would involve one PC remaining on to host the printer or buying a print server, but the DeskJet 6620 can plug directly into a wired network.

Network printers can be difficult to set up, but the 6620 was fine. Though none of the printers in this test comes with a USB lead, HP supplies this one with an Ethernet cable. The network status light on the front panel was so dim that it was hard to see in a well-lit room, but HP's installation program detected the DeskJet on our network and completed the installation without a hitch.

This is the only printer here that can be upgraded with a second paper tray or duplex unit, but both options together would cost £82. Though the PIXMA iP4200 lacks the 6620's Ethernet interface, it has similar paper-handling features as standard.

Like the DeskJet 5940, the 6620 comes with HP's high-yield black cartridge. Its standard colour tank is also high-yield, so it should be able to print plenty of pages before you need to order replacements. Using high-capacity cartridges, its running costs are identical to those of the 5940.

As you might expect with two inkjets that use the same cartridges and print heads, this printer's speeds and print quality were almost identical to those of the DeskJet 5940. Using an optional photo cartridge improved both printers' picture printing, but the times in our table on page 198 are for the standard four-ink setup.

VERDICT

To some extent, this printer suffers as a result of the 5940's excellence. The 6620 has better scope for upgrades and can print with an optional grey photo cartridge, but it isn't worth the extra £36, unless you need its Ethernet port.

✓ Very fast; quiet; cheap to run

✗ Quite expensive, but offers little more than the DeskJet 5940

SPECIFICATIONS Four-colour inkjet, 4,800x1,200dpi maximum resolution, USB and 10/100 Ethernet interfaces. **Part code** Q9034B



MANUFACTURER	CANON	EPSON	LEXMARK	CANON	HP	EPSON	HP	CANON	HP
Model	PIXMA iP1600	Stylus D68 Photo	Z735	PIXMA iP2200	DeskJet 5440	Stylus D88 Photo Edition	DeskJet 5940	PIXMA iP4200	DeskJet 6620
Rating	★★★★	★★	★★	★★	★★★	★★★	★★★★★	★★★	★★★
QUOTED SPEEDS									
Quoted speed, mono	19ppm	17ppm	15ppm	22ppm	22ppm	22ppm	30ppm	29ppm	30ppm
Quoted speed, colour	16ppm	9ppm	15ppm	17ppm	21ppm	12ppm	24ppm	19ppm	27ppm
TESTED SPEEDS									
Test 1, 50-page text document	5m 45s (8.7ppm)	15m 47s (3.2ppm)	6m 52s (7.3ppm)	5m 49s (8.6ppm)	3m 33s (14.1ppm)	3m 18s (15.2ppm)	2m 32s (19.7ppm)	4m 48s (10.4ppm)	2m 31s (19.9ppm)
Test 1 Duplex, 50-page text document	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10m 53s (4.6ppm)	N/A
Test 2 Letter, time to first page	20.5s	40.5s	54s	16.5s	16s	27.5s	21.5s	33s	16.5s
Test 2 Letter, total time for 50 copies	7m 32s (6.6ppm)	30m 58s (1.6ppm)	36m 22s (1.4ppm)	7m 47s (6.4ppm)	12m 21s (4.0ppm)	18m 41s (2.7ppm)	9m 57s (5.0ppm)	23m 43s (2.1ppm)	9m 00s (5.6ppm)
Test 3, 24 pages mixed colour	16m 10s (1.5ppm)	55m 04s (0.4ppm)	25m 35s (0.9ppm)	14m 19s (1.7ppm)	15m 07s (1.6ppm)	28m 31s (0.8ppm)	10m 59s (2.2ppm)	10m 02s (2.4ppm)	11m 59s (2.0ppm)
Test 4, two 10x8" photos	10m 39s	1h 20m 49s	9m 51s	8m 57s	15m 52s	49m 09s	11m 37s	16m 23s	12m 28s
Test 5, six 6x4" photos	18m 04s	37m 08s	15m 08s	14m 30s	18m 41s	24m 30s	13m 51s	24m 05s	18m 03s
PRINT QUALITY									
Maximum resolution	4,800x1,200dpi	5,760x1,440dpi	4,800x1,200dpi	4,800x1,200dpi	4,800x1,200dpi	5,760x1,440dpi	4,800x1,200dpi	9,600x2,400dpi	4,800x1,200dpi
Minimum colour droplet size	2pl	4pl	4pl	2pl	5pl	3pl	5pl	1pl	5pl
Number of colours (cartridges)	4 (2)	4 (4)	3 (1)	4 (2)	4 (2)	4 (4)	4 (2)	5 (5)	4 (2)
Maximum number of colours (cartridges)	4 (2)	4 (4)	3 (1)	4 (2)	6 (2)	4 (4)	6 (2)	5 (5)	6 (2)
Quoted photo durability (source)	30 years (Canon)	120 years (Epson)	Not stated	30 years (Canon)	82 years (Wilhelm Institute)	120 years (Epson)	82 years (Wilhelm Institute)	30 years (Canon)	82 years (Wilhelm Institute)
PHYSICAL AND ENVIRONMENTAL									
Standard interfaces	USB	USB	USB	USB	USB, PictBridge USB	USB, parallel	USB, PictBridge USB	USB Hi-Speed, PictBridge USB	USB, 10/100 Ethernet, PictBridge USB
Dimensions (HxWxD)	165x435x249mm	195x447x240mm	152x377x224mm	165x435x253mm	169x459x220mm	198x460x242mm	169x459x220mm	160x419x299mm	144x451x367mm
Weight	2.9kg	4kg	2.3kg	2.9kg	3.5kg	4.6kg	3.6kg	6.5kg	6kg
Noise	44dB(A)	42dB(A)	45dB(A)	44dB(A)	40dB(A)	42dB(A)	40dB(A)	35dB(A)	39dB(A)
Duty cycle (pages per month)	Not stated	Not stated	1,000	Not stated	1,000	Not stated	3,000	Not stated	5,000
Power consumption printing	10W	11W	14W	10W	44W	19W	44W	17W	63W
Power consumption standby	1W	2W	7W	1W	7W	4.5W	7W	1W	5W
PAPER HANDLING									
Maximum paper size	A4/legal	A4/legal	A4/legal	A4/legal	A4, custom length up to 610mm	A4/legal	A4, custom length up to 610mm	A4/legal	A4, custom length up to 610mm
Maximum paper weight	273gsm	300gsm	270gsm	273gsm	280gsm	300gsm	280gsm	273gsm	280gsm
Standard paper trays (capacity)	1 (100)	1 (120)	1 (100)	1 (100)	1 (100)	1 (120)	1 (100)	2 (300)	1 (150)
Maximum paper trays (capacity)	1 (100)	1 (120)	1 (100)	1 (100)	1 (100)	1 (120)	1 (100)	2 (300)	2 (400)
Duplex	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Yes	£31 (Q5712A)
PHOTO FEATURES									
Exif support	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PictBridge support	No	No	No	No	Yes	No	Yes	Yes	Yes
DPOF support	No	No	No	No	Yes	No	Yes	Yes	Yes
Borderless printing	A4	A4	A4	A4	A4	A4	A4	A4	A4
PC-less printing	No	No	No	No	Yes	No	Yes	Yes	Yes
Memory card support	No	No	No	No	No	No	No	No	No
CD printing	No	No	No	No	No	No	No	Yes	No
GENERAL									
Technology	Thermal inkjet	Peizo inkjet	Thermal inkjet	Thermal inkjet	Thermal inkjet	Peizo inkjet	Thermal inkjet	Thermal inkjet	Thermal inkjet
Supported operating systems	Windows 98/Me/2000/XP, Mac OS X 10.2.1 or later	Windows 98/Me/2000/XP, Mac OS 9 or later	Windows 98/Me/2000/XP	Windows 98/Me/2000/XP, Mac OS X 10.2.1 or later	Windows 98 SE/Me/2000/XP, Mac OS X 10.2 or later	Windows 95/98/Me/2000/XP, Mac OS 9 or later	Windows 98 SE/Me/2000/XP, Mac OS X 10.2 or later	Windows 98/Me/2000/XP, Mac OS X 10.2.1 or later	Windows 98/Me/2000/XP, Mac OS 9.1 or later and Mac OS X 10.1.5 or later
Other features	Paper thickness switch	None	Automatic head alignment	Paper thickness switch	None	None	Automatic head alignment	Automatic head alignment	Ethernet cable, automatic head alignment
Other options	None	None	None	None	#348 Photo cartridge (£20)	None	#348 Photo cartridge (£20)	None	#348 Photo cartridge (£20), #100 grey photo cartridge (£18)
BUYING INFORMATION									
Price including VAT	£43	£43	£47	£58	£58	£62	£74	£104	£110
Quoted life of supplied black cartridge(s)*	195 pages (5%)	230 pages (5%)	N/A	195 pages (5%)	210 pages (5%)	230 pages (5%)	800 pages (5%)	360 pages (5%)	800 pages (5%)
Quoted life of supplied colour cartridge(s)*	155 pages (15%)	250 pages (15%)	165 black pages (5%) or 200 colour pages (15%)	155 pages (15%)	175 pages (15%)	250 pages (15%)	260 pages (15%)	490 pages (20%)	450 pages (15%)
Cost per mono A4 page including VAT (coverage)*	7.2p (5%)	3.1p (5%)	7.6p (5%)	6.7p (5%)	5.8p (5%)	3.1p (5%)	2.2p (5%)	3.3p (5%)	2.2p (5%)
Cost per colour A4 page including VAT (coverage)*	11.4p (15%)	8.4p (15%)	6.2p (15%)	8.5p (15%)	8.3p (15%)	8.4p (15%)	4.7p (15%)	8.6p (20%)	4.7p (15%)
Price second paper cassette including VAT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	£51 (Q3447A)
Warranty	One year RTB	One year RTB	One year onsite exchange	One year RTB	One year RTB	One year RTB	One year RTB	One year RTB	One year RTB
Supplier	www.savastore.com	www.savastore.com	www.savastore.com	www.savastore.com	http://uk.insight.com	www.misco.co.uk	http://uk.insight.com	www.savastore.com	www.misco.co.uk
Details	www.canon.co.uk	www.epson.co.uk	www.lexmark.co.uk	www.canon.co.uk	www.hp.co.uk	www.epson.co.uk	www.hp.co.uk	www.canon.co.uk	www.hp.co.uk
Manufacturer part code	9989A011AA	C11C616021CA	20M0002	9990A011AA	C9045B	C11C617021CA	C9017B	9992A011AA	C9034B

*Figures based on five per cent coverage per colour per page. Total coverage given in brackets

LABS VERDICT BUDGET INKJET PRINTERS

It seems that average running costs have risen since we last looked at budget inkjet printers in our April 2005 issue. This is a big disappointment, as this cost tends to be hidden at the time of purchase and can make a cheap printer expensive in the long run.

That's true of the PIXMA iP1600, which has the highest overall running costs of this group. It's fast and has high print quality, but although it's affordable to buy it isn't a real bargain. Of the other entry-level printers, Epson's Stylus D68 is quite pricy in colour, but it's very cost-effective if

you mostly print mono text. Its print quality isn't bad, especially on plain paper. However, it is slow.

HP's DeskJet 5940 is the clear winner of the group. While it costs £31 more than the PIXMA iP1600 printer, its lower running costs mean that you'd only need to print 620 mono pages or around 460 in colour before it became better value. In fact, given the generous capacity of the supplies in HP's box, it's almost better value straight off the shelf. Value isn't the DeskJet 5940's only strength, though. It is the fastest printer overall, being particularly speedy when printing black text, and its

print quality is consistently high. It feels well made, looks smart and comes with a PictBridge port. It wins our Best Buy award. **ES**

HP DeskJet 5940

